

## **Anderson Dam Seismic Retrofit Project**

## **About the Project**

Valley Water (the Santa Clara Valley Water District) plans to retrofit and strengthen Anderson Dam in Morgan Hill so it can safely withstand a large earthquake. Known as the Anderson Dam Seismic Retrofit Project, this effort will ensure public safety and secure a reliable water supply.

## Why this project?

A large earthquake on the Calaveras Fault or the Coyote Creek Fault could result in significant damage to Anderson Dam, possibly leading to dam failure and uncontrolled water release that could inundate cities and rural areas from San Francisco Bay south to Monterey Bay, including much of Silicon Valley. Additionally, earthquakes could cause faults running under the dam to damage the existing outlet pipe used to release water from the reservoir.

#### YOUR TAX DOLLARS AT WORK





**PRIORITY C** Protect our water supply and dams from earthquakes and other natural disasters



# Anderson Dam Seismic Retrofit Project

**PRIORITY C** Protect our water supply and dams from earthquakes and other natural disasters **PROJECT C1** 



#### The Seismic Retrofit Project

Valley Water initiated the Anderson Dam Seismic Retrofit Project in 2012 following a seismic stability evaluation. During the design phase, additional studies revealed previously unidentified fault lines, extending the length of time to complete the project. Valley Water is working closely with the Federal Energy Regulatory Commission (FERC) and the State Division of Safety of Dams (DSOD) to modernize the dam.

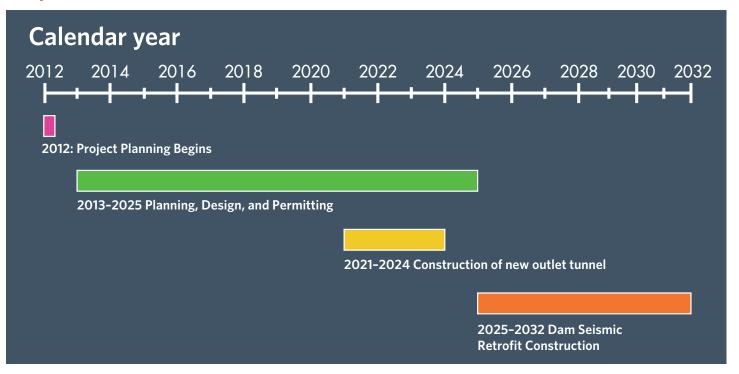
In 2020, Valley Water merged the project with the restoration measures for the Coyote Creek Watershed under the Fish and Aquatic Habitat Collaborative Effort (FAHCE) to best promote a healthy fish population below Anderson Dam. The Anderson Dam Project includes restoration measures downstream because water released from Anderson Reservoir flows into Coyote Creek.

#### **Project Schedule**

In 2021, Valley Water broke ground on the Anderson Dam Tunnel Project on the abutment of Anderson Dam that will allow for the controlled release of water during a storm or other emergency. Tunnel excavation is underway and is expected to continue through 2023.

Following construction of the outlet, Valley Water will begin the seismic retrofit project to strengthen the dam in case of a large earthquake. The work includes building a high-level outlet and removing and rebuilding the spillway and dam's embankment. While the project timeline depends on permit requirements and field conditions, Valley Water expects to complete the work in 2032.

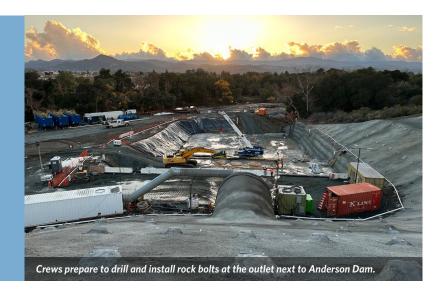
#### **Project timeline**





#### **Project Scope**

- Seismic retrofit of the dam embankment.
- Construction of new higher capacity outlet tunnel and outlet works.
- Replacement of a major section of the concrete spillway and raising the wall height by 9-feet to safely discharge large storm flows
- Increase the dam crest height by 7-feet to provide more freeboard for larger storm runoff.



#### **Project Cost & Funding**

The construction contract for the Anderson Dam Tunnel Project was awarded for \$161 million in 2021. The total cost for the Anderson Dam Tunnel Project and the Anderson Dam Seismic Retrofit Project is \$1.2 billion. Of the total cost, 15 to 20 percent is utilized for planning, design, construction management, environmental studies, permitting and documentation. The remaining cost is for construction and environmental mitigation. Cost estimates may change as the project progresses.

The renewed Safe, Clean Water and Natural Flood Protection Program, which voters approved in 2020, will contribute \$54.1 million to the project. Additionally, the earlier 2012 Safe, Clean Water Program contributed \$14 million to the project.

#### **Anderson Dam Existing Configuration**



**Spillway** 

**Existing Outlet pipe** 

Dam embankment

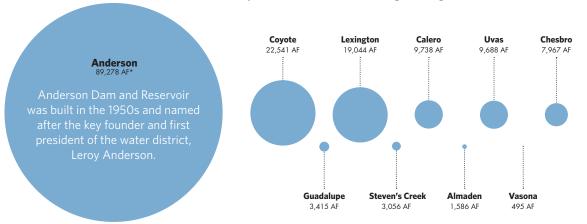
**Crest of dam** 



#### About Anderson Dam & Anderson Reservoir

Anderson Dam was built in 1950 and named after Leroy Anderson, the key founder and first president of the Santa Clara Valley Water District. A long, deep natural gorge located three miles east of U.S. 101 in Morgan Hill provided a suitable dam site.

The 235-feet high earthen dam sits along the Coyote Creek Fault on Coyote Road, east of Morgan Hill. Anderson Reservoir lies parallel to the Calaveras Fault. The reservoir holds approximately 90,000 acre-feet of water when full and is currently the largest of the 10 Valley Water reservoirs. It is large enough to fit all nine reservoirs inside its area.



\*One acre-foot is 325,851 aallons of water, which is enough to serve the needs of two households of five, for one year.

## **Existing Anderson Dam By the Numbers**

1950

constructed

192.7

Drainage Area (square miles above the dam) 89,278

Reservoir capacity (acre feet)

1,245

Reservoir surface area when full

Reservoir Length (miles)

3,320,000 49

Cubic yards of fill

Outlet pipe diameter

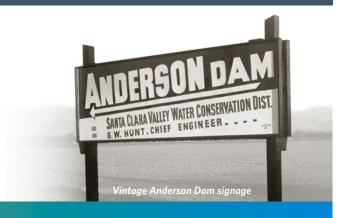
Average annual yield acre-feet

For other questions, contact Neighborhood Liaison Tony Mercado at tmercado@valleywater.org.

Envíe un correo electrónico a Translations@valleywater.org si tiene preguntas sobre este documento.

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